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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,082	12/26/2001	Jerome Schmitt	0035-ET-PCT	7766
24948	7590	01/29/2004	EXAMINER	
ALFRED H. MURATORI MICROCOATING TECHNOLOGIES, INC. 5315 PEACHTREE INDUSTRIAL BLVD ATLANTA, GA 30341-2107			STEIN, STEPHEN J.	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/019,082

Applicant(s)

SCHMITT ET AL.

Examiner

Stephen J Stein

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☒ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

It is noted that the WIPO stamped copy of the foreign priority document is not present in the electronic file wrapper. The Office will attempt to acquire another copy of this document from the IB.

### *Specification*

1. The abstract of the disclosure is objected to because the abstract is not in the form of a single paragraph on a separate sheet. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,132,282 (Newman et al.).

Newman teaches a superconducting structure comprising a single crystal sapphire substrate and an epitaxial strontium titanate film having a thickness of 5 nm to 300nm (Col. 6, lines 39-56). Newman further teaches that a c-axis scan shows that the samples are well aligned in the c-axis direction (col. 5, lines 55-65).

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4. Claims 1, 3 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,572,052 (Kashihara).

Kashihara teaches an electronic device having main insulating layer and sub-insulating layer on a sapphire substrate, and which is sandwiched between a pair of electrodes, wherein the sub-insulating layer is formed of epitaxial barium strontium titanate (col. 6, lines 50-68 and col. 3, lines 46-66).

5. Claims 1, 4, 6 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,376,090 (Kijima et al.).

Kijima teaches a ferroelectric thin film of epitaxial PZT (lead zirconium titanate) having 111 orientation and grown on a sapphire substrate and having a thickness of 250nm and electrode on the thin film (See abstract, col. 4, lines 62-67 and col. 9, lines 51-68).

6. Claims 1, 3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,614,018 (Azuma '018).

Azuma'018 teaches use of a liquid precursor process to add dopants including bismuth to BST (barium strontium titanate) films on sapphire substrates (col. 10, lines 44-55 and col. 4, lines 55-60).

7. Claims 1, 4, 5 and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by JP11031921A (Tszumi et al.).

Tszumi teaches a voltage controlled oscillator comprising an either a 0.2  $\mu\text{m}$  (200nm) BST thin film or a 0.8 $\mu\text{m}$  (800nm) PZT thin film formed on a sapphire substrate and further comprising aluminum electrodes (See abstract).

***Allowable Subject Matter***

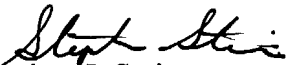
8. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: While the prior art teaches adding dopants such as bismuth to epitaxial BST films formed on strontium substrates, the prior art fails to teach or suggest doping with both cesium and bismuth.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Stein whose telephone number is 572-272-1544. The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 5:00 p.m. If the attempts to reach the examiner are unsuccessful, the examiner's supervisor, Deborah Jones can be reached by dialing 572-272-1535.

January 22, 2004

  
Stephen J. Stein  
Primary Examiner  
Art Unit 1775